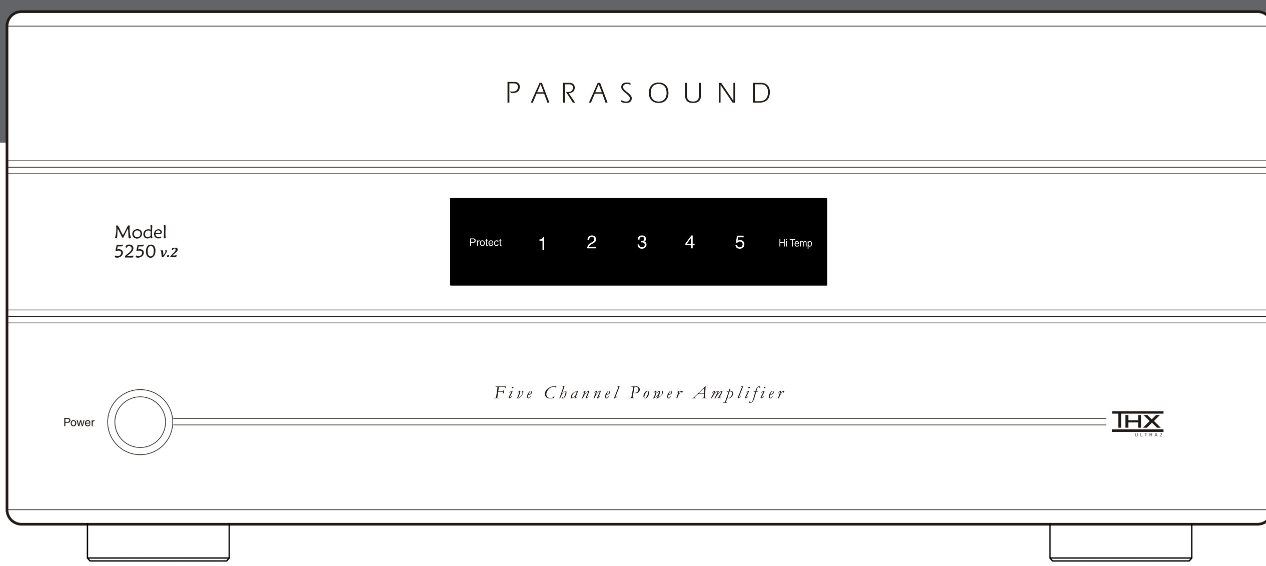
PARASOUND
NEWCLASSIC



Model 5250 v.2

Five Channel Amplifier

OWNER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS

The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of "dangerous voltage" inside the product that may constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

1. **Read Instructions** — Read all the safety and operating instructions before operating this product.
2. **Retain Instructions** — Retain safety and operating instructions for future reference.
3. **Heed Warnings** — Adhere to all warnings on the product and in the operating instructions.
4. **Follow Instructions** — Follow all operating and use instructions.
5. **Cleaning** — Unplug this product from the wall outlet before cleaning. Use a damp cloth for cleaning. Clean the outside of the product only.
6. **Attachments** — Do not use attachments that are not recommended by the product manufacturer; they may be hazardous.
7. **Water and Moisture** — Do not use this product near water.
8. **Accessories** — Do not place this product on an unstable cart or stand. The product may fall, causing bodily injury and damage to the product. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart to overturn.
9. **Ventilation** — Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.
10. **Power Sources** — Operate this product only from the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your dealer or local power company. This product is equipped with a three-prong grounding plug. This plug will only fit into a grounding power outlet. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. **Power Cord Protection** — Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.
12. **Lightning** — Unplug the unit from the wall outlet for added protection during a lightning storm and when it is left unattended and unused for long periods of time. This will prevent damage to the product due to lightning and power line surges.
13. **Overloading** — Do not overload wall outlets or extension cords. This can result in a fire or electric shock.
14. **Inserting Objects into Unit** — Never push objects of any kind into this product through any openings; they may touch dangerous voltage points or short out parts that could result in fire or electric shock.
15. **Servicing** — Do not attempt to repair or service this product yourself. Opening or removing covers may expose you to dangerous voltage and other hazards. Refer all servicing to qualified service personnel.
16. **Damage Requiring Service** — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions: **a)** If the power-supply cord or plug is damaged. **b)** If liquid has been spilled into the product. **c)** If the product has been exposed to rain or water. **d)** If the product does not operate normally by following the operating instructions. **e)** If the product has been dropped or damaged in any way. **f)** If the product exhibits a distinct change in performance.
17. **Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer. Unauthorized substitutions may result in fire, electric shock, and other hazards.
18. **Safety Check** — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
19. **Wall or Ceiling Mounting** — Mount the product to a wall or ceiling only as recommended.
20. **Heat** — The product should be situated away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.

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INTRODUCTION

Congratulations and thank you for your purchase of this precision Parasound audio component.

The Parasound Model 5250 v.2 is the latest generation of popular and proven audio power amplifiers dating back to 1981. It has been designed for a wide variety of applications, establishing a new standard for audio performance, user-friendliness and utility in custom installations.

The versatility of the Model 5250 v.2 allows many connection and configuration options, so please be sure to read this manual thoroughly before you begin installation

Unpacking

Carefully unpack your Model 5250 v.2 and these accessories:

- Detachable AC power cord
- Trigger wire with a 3.5 mm mini plug at each end

Please inspect the unit now and contact your Parasound Dealer promptly if you see evidence of shipping damage. Save the carton and packing inserts in case you move or in the event you need to ship your amplifier for repair. Before you proceed, locate the serial number on the rear panel or underside of the unit and record it here for future reference:

OWNERSHIP REFERENCE INFORMATION	
Parasound Serial Number:	
Date of Purchase:	/ /
Name of Dealer:	
Dealer Street Address:	
Dealer Phone:	( ) -

115v – 230v AC Voltage

110–120V is the typical AC voltage in North America; most other countries supply 220–240V. The 5250 v.2 is internally wired for either 115V or 230V, according to where you purchased it and the voltage that is marked on its carton. If you plug a unit that is wired for 115V into a 230V outlet it can damage it.

Note: Only a qualified repair technician should make AC voltage conversions.
For your own safety, please do not attempt this yourself!

Installation and Ventilation Requirements

Install your Model 5250 v.2 away from heat sources such as heating ducts, radiators, or other heat producing components. Always position it horizontally.

Observe the following ventilation guidelines when installing the Model 5250 v.2 in an equipment rack or any other enclosed space:

You should never install the Model 5250 v.2 in an unventilated equipment cabinet or compartment because hot air will not exhaust adequately to prevent overheating. Air won't often circulate adequately in a cabinet or enclosure whose front and back sides are open; pockets of intense heat can still develop around any heat-producing equipment. Therefore, a ventilation fan is highly recommended. Allow a few inches of empty space on each side and above the unit and try to avoid crowding or stacking the Model 5250 v.2 tightly between other components. A ventilation fan is also recommended where other equipment must be mounted close to the Model 5250 v.2.

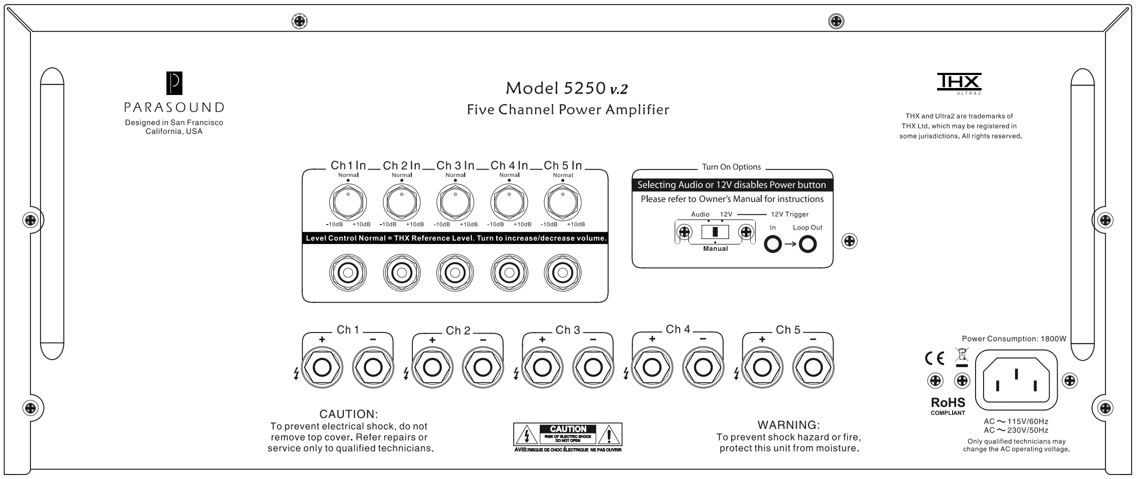
Do not place the unit on carpeting or any other material that could obstruct air flow into the ventilation holes in its chassis bottom.

Rack Mounting

The Model 5250 v.2 occupies four rack spaces in a standard 19" equipment rack.

For rack mounting, you must use the Parasound RMK44 rack mounting kit (purchased separately). We recommend that you use the 8 insulated shoulder washers with the four mounting bolts which are included with the RMK44. This eliminates metal-to-metal contact between the Model 5250 v.2 chassis, the equipment rack, and the other components in the rack. Position these washers on both sides so they "sandwich" the front panel before the mounting bolts are screwed into the rack rail.

REAR PANEL CONNECTIONS AND CONTROLS



Connection Precautions

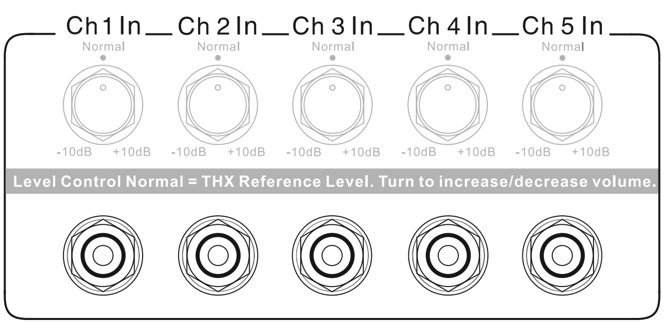
Disconnect the AC cord before making or changing any input, trigger, or speaker wire connections. Make sure there is no strain or tension on any wires that could cause them to pull loose

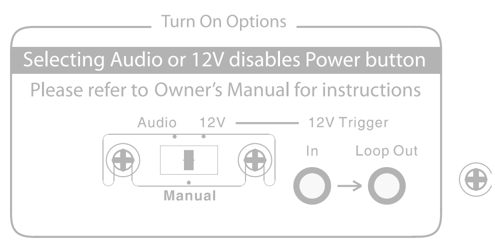
Audio In Jacks

Connect the cables from your preamplifier or multi-room controller's output jacks to the Model 5250 v.2's channel 1–5 audio Input jacks.

We suggest using channels 1 and 2 for your left front (L) and right front (R) channels. This will assure correct operation of the Turn On Options audio sensing, should you choose to use it. Here is why:

- When you listen to a stereo source your surround controller will have audio signals only at its left and right channel output jacks. The other channels won't receive an audio signal for the Turn On Options circuit to sense.
- Even if you always listen in a surround mode, the sub, center and surround channel sound levels aren't high enough, on a consistent basis, for the Turn On Options audio sensing.



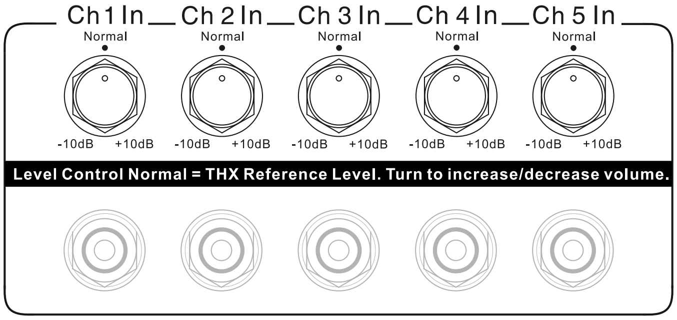


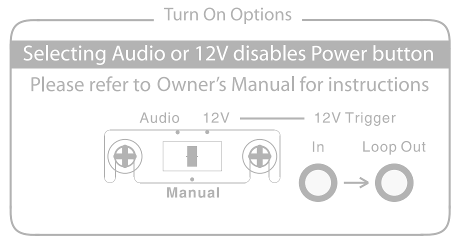
5.1 Channel Connections

We recommend these connections:

	5250 v.2 Input jack Connects to Surround Controller's Output:	**5250 v.2 Speaker Terminal** Connects to:
Channel 1	Left or L channel	Left front speaker
Channel 2	Right or R channel	Right front speaker
Channel 3	Center, or Ctr channel	Center speaker
Channel 4	RS or Right surround channel	Right surround speaker
Channel 5	LS or Left Surround channel	Left surround speaker

Gain Control Knobs for Channels 1–5





The Gain control knobs should be left at the 12 o'clock Normal setting for most applications.

When a Gain control knob is set to Normal the gain for that channel is 29. This is the THX Ultra2 Reference level where 1V input = 28.28V output. 28.28V driving an 8 speaker = 100 watts. If you are unsure where to set the Gain control knobs it is best to start with them in the Normal position and only change them if needed as described below.

When to Set the Gain Control Knobs Above or Below Normal

You can increase loudness by turning the Gain control knobs clockwise if your system will not play loud enough with the Gain control knobs set at Normal. This could be the case if your 5125 v.2 is driven from the pre-out jacks on many AV receivers. We recommend advancing the gain as little as possible past Normal. As you increase gain settings you increase the chance of hearing a "hiss" sound from your speakers. You also run the risk of damaging your speakers (not to mention your hearing) if the volume level is too high.

The primary reason to reduce the gain would be if your speaker efficiency is extremely high and your listening position is close to your speakers. Reducing the gain would reduce audible "hiss" from your speakers.

Don't worry about setting the 5125 v.2 Gain control to exactly the same levels for all channels because you can always balance the speaker volume using the speaker level calibration in your home theater AV receiver or processor's setup menu. We recommend re-calibrating your AV receiver or processor's speaker levels after adjusting the 5125 v.2 gain controls.

7.1 Channel Speaker Connections

If you plan to use your 5125 v.2 in a 7.1 system you will need to use a two channel power amplifier for the two additional speakers. You have two hookup options which depend on the quality of the separate two channel power amplifier. We recommend using the better amplifier for the left and right front speakers because their sonic contribution to your listening is more significant than the surround back channel speakers.

It also assures the best results when you're listening to pure stereo.

- If the 5125 v.2 is more powerful than the two channel amplifier, we recommend the preceding 5.1 channel connections for the 5125 v.2. Use the two channel amplifier for the surround back channels.

  For example, if your two channel amplifier is the Parasound Model 275 v.2 rated at 75 watts/channel, use the 275 v.2 for the surround back channels and your 5125 v.2 for the other five channels.

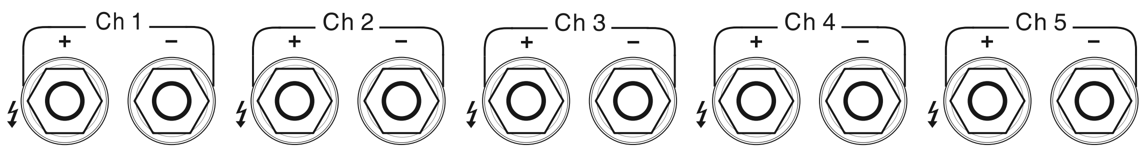
- If the two channel amplifier is of high quality, with at least the same power rating as the 5125 v.2, we recommend that you use the two channel amplifier for the front left and right channels, and the following connections for the 5125 v.2

  For example, you might prefer a Parasound Model 2125 v.2 to drive your left and right speakers, and use your 5125 v.2 for the other five channels. Even with the same 125w/channel power rating, the 2125 v.2 has a performance edge over the 5125 v.2, with superior channel separation and lower channel-channel crosstalk.

7.1 Channel Speaker Connections (continued)

	5250 v.2 Input jack Connects to Surround Controller's Output:	**5250 v.2 Speaker Terminal** Connects to:
Channel 1	Center, or Ctr channel	Center speaker
Channel 2	RS or Right surround channel	Right surround speaker
Channel 3	RB or Right surround back channel	Right back speaker
Channel 4	LB or Left surround back channel	Left back speaker
Channel 5	LS or Left Surround channel	Left surround speaker

Note: If you elect this connection arrangement you will probably need to use the Turn On Options12V option because none of these channels supplies adequate levels for the 5125 v.2's Audio sensing.



Each – and + speaker terminal will accept bare speaker wire up to AWG 12, a wire terminated with a ¼" spade lug, or with a single banana plug; dual banana plugs which are ¾" (19mm) apart may be used for each speaker.

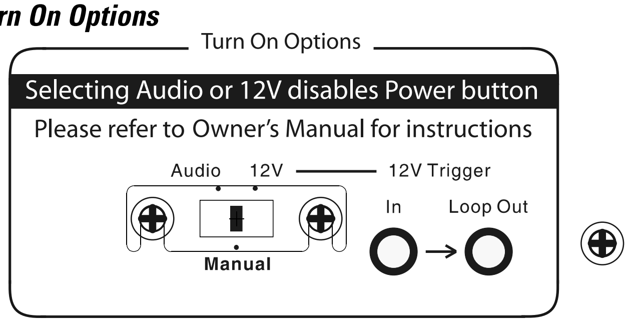
If you use bare wires, remove only enough insulation, about ½" (12mm) for each exposed bare wire to insert through the small hole in the side of the binding post. Before inserting a bare wire, twist the strands tightly between your fingers to prevent strays that might touch the chassis or another terminal and cause a short circuit. If you have soldering experience you may want to "tin" the stripped bare wire with solder for a cleaner termination and to prevent the wire from oxidizing.

Correct Speaker Polarity is Important

As you connect the speaker wires, you can see that the insulation on one of the two wires in each pair has either printing or a raised ridge. The marking lets you know which wire you connected to the positive speaker terminal at its other end.

Make sure the + wire you attach to each Model 5125 v.2 + speaker terminal is attached to the + terminal of the speaker for that channel.

Turn On Options



Turn On Options Switch

For convenience, there are three ways the Model 5250 v.2 can be turned on and off.

- Manually, by pressing the Power button on the front panel.
- Automatically, when a suitable trigger voltage is applied to its 12V In (input) jack.
- Automatically, when an audio signal is present at the channels 1 and 2 audio Input jacks.

When either automatic turn on is selected the Model 5250 v.2 front panel Power button is disabled so that on/off is determined solely by the triggering preamp or system controller.

Man (Manual) Position

When the Turn On Options switch is in its MAN (manual) position, the Turn On Options function is disabled and the Model 5250 v.2 must be turned on and off manually by pressing the Power button on its front panel.

Auto - 12V Position

Your 5250 v.2 will not operate manually when the Turn On Options switch is set to 12V.

When the Turn On Options switch is set to its 12V position, the Model 5250 v.2 is turned on and off only with an external +9 V to + 12 V voltage from your preamp or controller. When the external voltage ceases the Model 5250 v.2 will turn off immediately. The 12V switch position disables the front panel Power button.

Auto - Audio Position

Your 5250 v.2 will not operate manually when the Turn On Options switch is set to Audio.

When the Turn On Options switch is set to its Audio position, the Model 5250 v.2 will be turned on only when an audio signal is present at its Channels 1 and 2 Input jacks. After the audio signals cease the Model 5250 v.2 will remain on for about ten minutes before shutting off. This prevents unintended turn-off during pauses in your music or movies. The Audio position of the Turn On Options switch also disables the front panel Power button.

Note: When the Turn On Options switch is set to Audio the 5250 v.2 will turn itself on immediately when you connect its AC cord, even without any audio signal present. This is normal.

Note: If the Model 5250 v.2 is driving only the sub, surround, center, or rear channels you will achieve more consistent automatic turn on by using the 12V DC trigger. At the beginning of most films the sub, center and surround levels are lower than the minimum level required by the Audio sensing circuit.

12V In Jack

The Model 5250 v.2 12V input uses a 3.5mm mini jack. To trigger the Model 5250 v.2, insert the trigger wire plug into this jack and the plug at the wire's other end into the source component's trigger output jack. We have included a 3.5mm to 3.5mm trigger wire.

Note: Ifthe controller's trigger output is a + and – terminal, you can cut the 3.5mm plug off one end of the included trigger wire and attach the bare wires to these terminals. The lead with the white stripe on it corresponds to the plug's tip and the unmarked lead corresponds to the sleeve of the plug.

Note: If the trigger voltage source is DC, the trigger plug tip must be + (positive) and its sleeve – (negative).

12V Out Jack

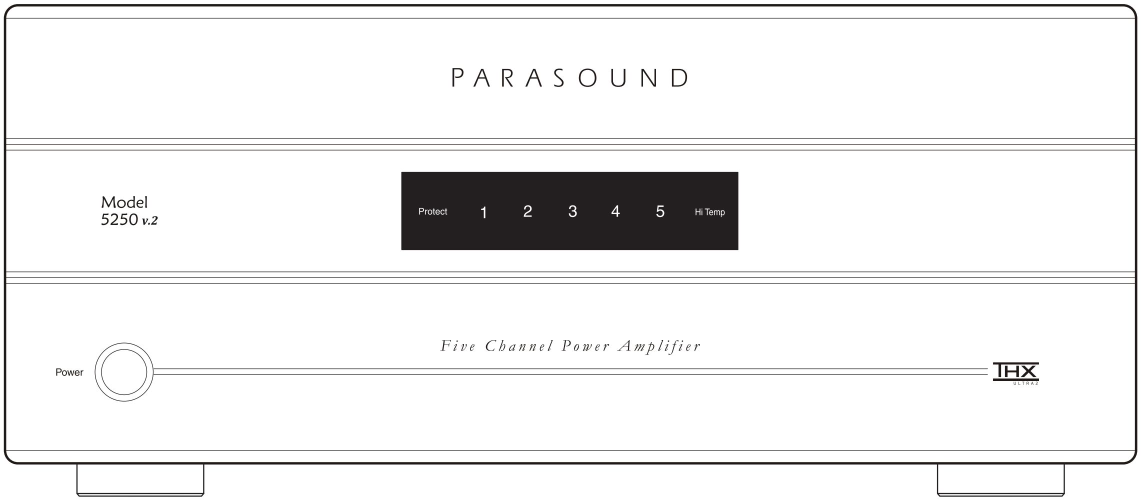
The Trigger Out jack lets you loop or "daisy-chain" the incoming trigger voltage to an additional Model 5250 v.2 or other component

Note: The Model 5250 v.2 trigger circuit draws a negligible 15 mA from the controller. The total load on your controller's trigger output(s) is the sum of the trigger current drawn by each of the components you've looped together. Check the maximum capacity of your AV receiver, processor or home controller's trigger outputs so you do not overload them by connecting too many power amplifiers. Typical ratings are 50mA to 100mA.

AC Power Connections and AC Grounding

If possible, plug your Model 5250 v.2 into the same AC outlet that your accompanying audio components (especially the system controller) are plugged into. The ground potential between different AC outlets may be different, resulting in audible hum.

FRONT PANEL BUTTONS AND DISPLAY



Power Button

Press the Power button once to turn the Model 5250 v.2 on, press it again to turn it off. The Power button is inoperative when the Turn On Options switch on the rear panel is set to Audio or 12V.

Protect Indicator

The Protect indicator will illuminate red if the Model 5250 v.2 experiences an external fault condition and the unit will stop playing. This prevents possible damage to the unit from continued operation. Examples of external fault conditions are short circuited speaker wires, excessive heat, and trying to drive too many speakers at high levels.

If Protect is illuminated you need to locate and correct the fault; for example, remove the short circuit, let the unit cool down, check the load impedance and lower the volume level. To reset the protection circuit you need to turn the unit off.

Turning it off:

- Turn On Options switch (on the rear panel) in the Man position: press the Power button on the front panel.
- Turn On Options switch in the 12V position: turn off the 12V trigger source; the 5250 v.2 will turn itself off right away. You can also turn it off by unplugging its AC power cord.
- Turn On Options switch in the Audio position: turn off the preamplifier, surround controller or system controller that dri ves your 5250 v.2. You can also unplug the 5250 v.2's AC power cord.

Note: It requires approximately 10 minutes after removing the audio source before the 5250 v.2 turns itself off. If you don't want to wait and you have access to its AC cord, simply unplug it. Leave it off and/or unplugged for awhile to cool down and you're confident the fault is corrected. If you unplugged its AC power cord to turn it off, plug it in again.

Hi-Temp Indicator

Hi-Temp will illuminate red when the Model 5250 v.2 exceeds its maximum safe operating temperature. If the heat persists, the unit will activate its protection circuit and stop playing. It will remain in this protection mode until the temperature drops and the unit is turned off to reset its protection circuit. Use the same turn-off procedure as above. If Hi-Temp appears, it's likely the unit is been over-driven at too high a listening level or is attempting to drive a speaker load impedance that is too low. It's probable the unit has not been provided with sufficient ventilation. These conditions must be corrected before turning it on again to resume operation.

Channel 1 2 3 4 5 Status Indicators

1 2 3 4 5 will illuminate green when the Model 5250 v.2 power is on and it is operating normally. The 1 indicator will not light if a fault is only in channel 1; the 2 indicator will not light if a fault is only in channel 2, and so on. None of the five indicators will illuminate if there is a general fault or if the temperature is too high.

PROBLEMS AND REMEDIES

Maintaining Your Model 5250 v.2

Your Parasound Model 5250 v.2 power amplifier requires no periodic maintenance and functions at its best when providing you with many hours of enjoyment. It has no user-serviceable parts inside. To avoid the risk of electric shock, do not remove its top cover. The exterior can be cleaned with a soft cloth pre-moistened only with a few drops of water or glass cleaner.

No sound

- Check that AC is live.
- Check that input cables and speaker wires are secure at both ends.
- Make sure the surround controller is switched to the correct input.
- Is the unit on? Check the setting of the Turn On Options switch.
- Doesn’t turn on with the Turn On Options - Audio. Try the 12V trigger instead.
- If using Turn On Options - Audio, connect channels 1 and 2 to the L and R controller outputs
- If using Turn On Options - Audio, increase the sensitivity of the audio trigger.
- Is the Hi-Temp or Protect (or both) illuminated? Check for excessive temperature, short-circuited speaker wires, low impedance speaker load, and inadequate ventilation to remove heat.

Background Hum

- Move audio cables and AC cords away from each other.
- Try different routes for the audio cables and AC cords.
- Make sure insulating shoulder washers are used if unit is rack mounted.

Overheating

- Remove any external sources of heat.
- Increase ventilation around the Model 5250 v.2.

IF YOU REQUIRE ASSISTANCE

Call your Parasound dealer first. If the dealer can't help you with your problem we encourage you to call Parasound's Technical Service Department, toll-free at **415 397-7100**, Monday – Friday, 8am – 4pm Pacific time. We can suggest other diagnostic tests you can easily perform. If we determine that your Model 5250 v.2 should be returned to Parasound or an Authorized Parasound Warranty Center for inspection and possible servicing, we will provide the location of a warranty center near you or shipping instructions and a Return Authorization number for its return to Parasound.

Before You Return Any Unit to Parasound for Service

Before you send your unit to Parasound, you will need to obtain a specific Return Authorization (RA) number and shipping instructions from Parasound's Technical Department. The RA number must be clearly marked on the outer carton. Use the original factory packing materials and arrange adequate insurance to cover its value. You must include a copy of your purchase receipt, since this document establishes the validity of this unit's warranty. Warranty repairs are only performed by Parasound or Parasound Authorized warranty centers when your purchase receipt is from a Parasound Authorized Dealer or Parasound Authorized Reseller.

Units Will Be Refused by Parasound Under the Following Conditions

1. Unit was sent without the Parasound-assigned RA number marked on the carton.
2. Unit was sent in an unsuitable shipping carton, likely to have been damaged in transit.
3. Unit has inadequate packing, unit likely to have been damaged in transit.
4. Unit was shipped collect for shipping charges. We do not accept collect shipments.
5. Unit was shipped via the US Postal Service.
6. Unit was sent to an address other than the address instructed by our Technical Department.

Warranty Repair

Read your accompanying Parasound Limited Warranty carefully to understand the applicable rights and limitations. This section provides instructions for obtaining repairs, both for units covered under the Parasound Limited Warranty and for units or situations which are outside the Warranty.

Unit is not eligible for repair under the terms of the Parasound warranty if:

1. Unit was not purchased from a Parasound Authorized Dealer or Parasound Authorized Reseller.
2. You are not the original owner. The warranty is not transferable.
3. Unit's serial number was removed, modified, or defaced.
4. Unit shows evidence of abuse and/or misuse.
5. Unit was modified in any way.
6. A prior repair was attempted by an unauthorized repair station.

Continuous RMS Power Output

20 Hz – 20 kHz, Five Channels Driven

250 watts x 5, 8 Ω

385 watts x 5, 4 Ω

Current Capacity

45 amps peak per channel

Frequency Response

20 Hz – 50 kHz, +0/-3 dB, 1 watt

Dynamic Headroom

1.6 dB

Total Harmonic Distortion

0.025% at full rated output

0.02% at average listening levels

IM Distortion

0.05 %

Transient IM Distortion

Not measurable

S/N Ratio

114 dB at rated output, IHF A-weighted

106 dB at rated output, unweighted

93 dB at 2.828 V output, IHF A-weighted

84 dB at 2.828 V output, unweighted

Input Impedance

33 k Ω

Input Sensitivity

1 V in for 28.28 V out, THX standard

1.6 V for full rated output
(When gain controls set to the Normal position)

Inter-Channel Crosstalk

85 dB, 1 kHz

73 dB, 10 kHz

67 dB, 20 kHz

Damping Factor

Over 150 at 20 Hz

Turn On Options – DC

9 – 12V, 15 mA

Turn On Options – Audio

1.2 mV – 12 V, adjustable

10 minute turn off delay

AC Power Requirement

110 – 120 V / 220 – 240 V, 50 – 60 Hz

1 watt standby; 2500 watts full output

Dimensions

17¼" Wide

18½" Deep with connectors

7⅝" High with feet, 7" panel only

437 x 470 x 193mm, 176mm panel only

Net Weight

69 lbs., 31.4 kg

Rack Mount Accessory

May be Purchased Separately

RMK44

Before any home theatre component can be THX Ultra2 certified, it must pass a rigorous series of quality and performance tests. Only then can a product feature the THX Ultra2 logo, which is your guarantee that the Home Theatre products you purchase will give you superb performance for many years to come. THX Ultra2 requirements cover every aspect of the product including performance and operation.

Note: Specifications are subject to change or improvement without notice.

Notes:

Notes:

We invite you to visit www.parasound.com for the most up-to-date information on your unit and to find out about other Parasound products. Learn why Parasound has been a quality and value favorite of magazine reviewers, sound professionals and listeners like you since we were founded in 1981.

HALO by PARASOUND

PARASOUND NEWCLASSIC

C series

PARASOUND®

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